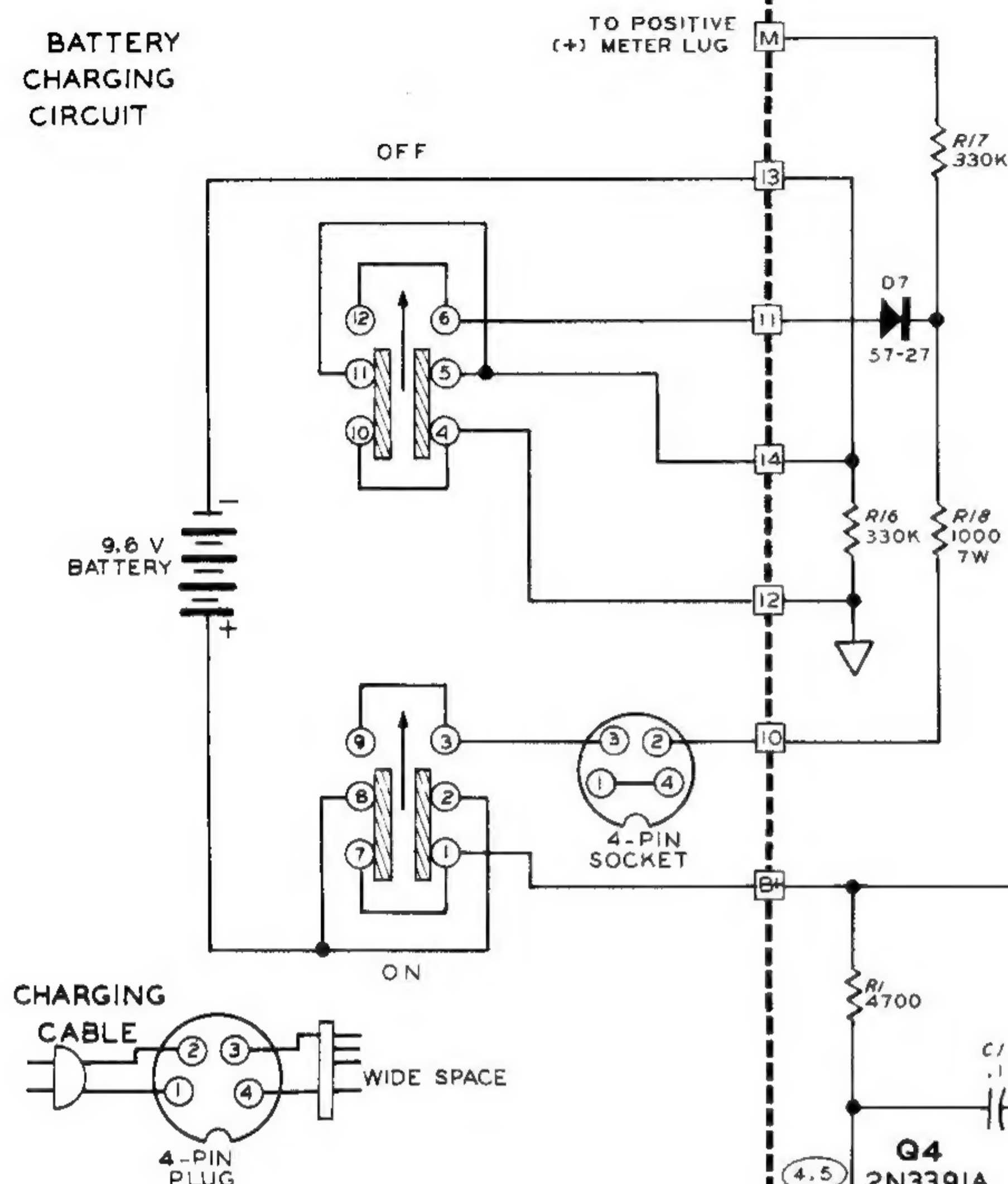


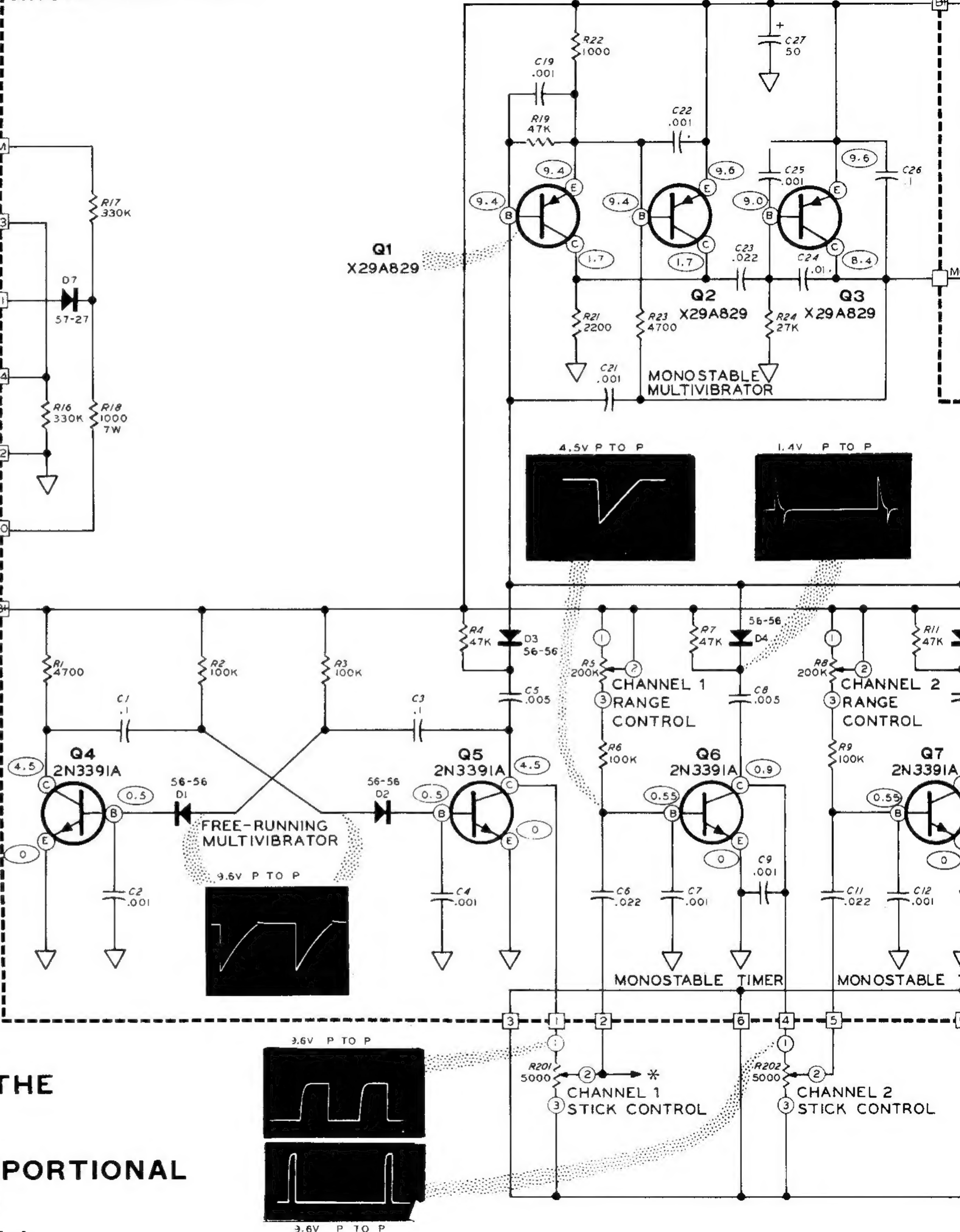
BATTERY CHARGING CIRCUIT



* SEE 53 MHz BAND RF CIRCUIT BOARD.

** SEE 53 MHz BAND RF CIRCUIT BOARD.

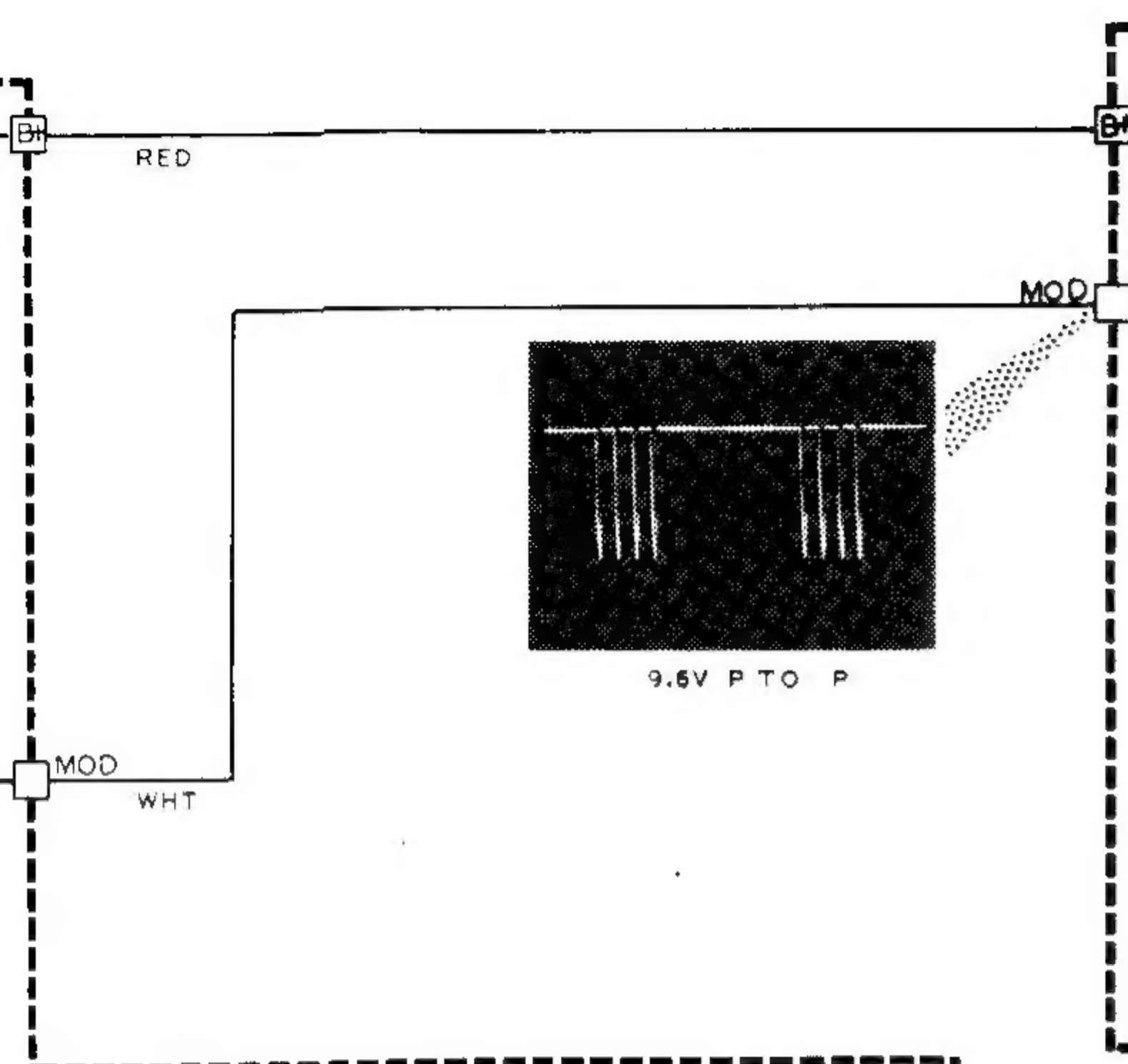
ENCODER CIRCUIT BOARD



SCHEMATIC OF THE HEATHKIT®

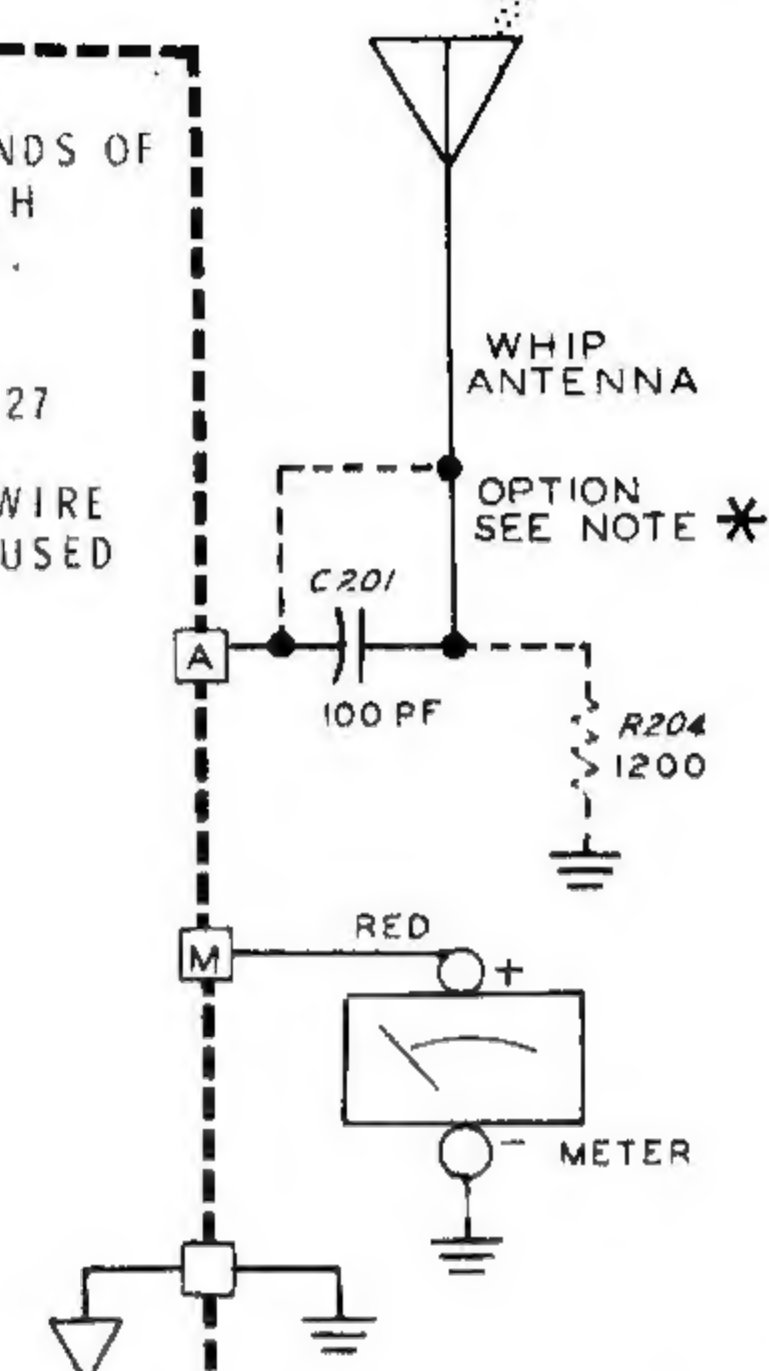
3-CHANNEL DIGITAL PROPORTIONAL TRANSMITTER

MODEL GDA-57-1

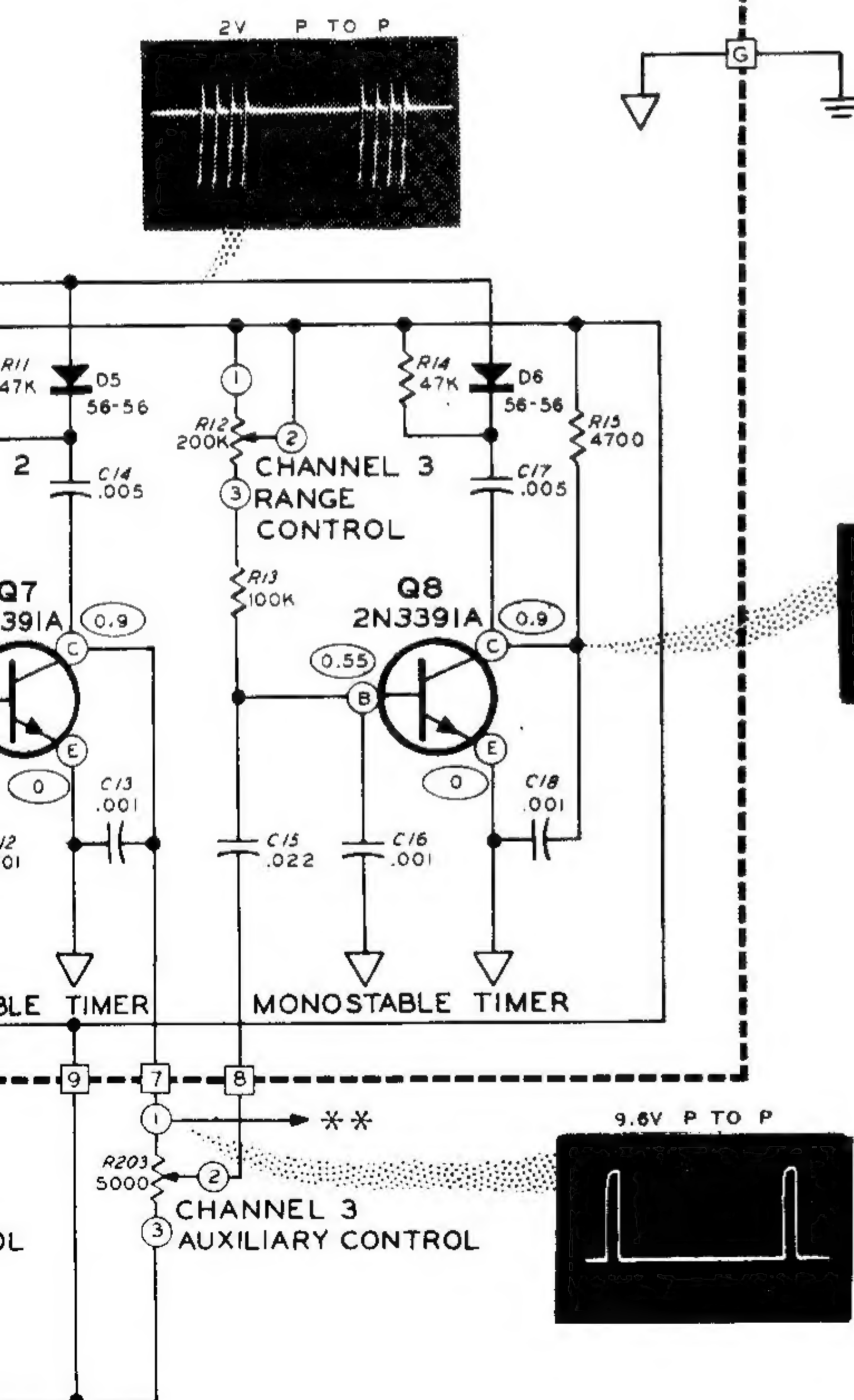


NOTE:
THE 27, 53, AND 72 MHz BANDS OF
RF TRANSMITTER CIRCUIT EACH
HAVE A DIFFERENT SCHEMATIC.
SEE SCHEMATICS AT RIGHT.

* C201 IS USED ONLY WITH THE 27
MHz BAND TRANSMITTER, THE
OTHER BANDS USE A JUMPER WIRE
AND NO CAPACITOR. R204 IS USED
ONLY ON THE 72 MHz BAND.

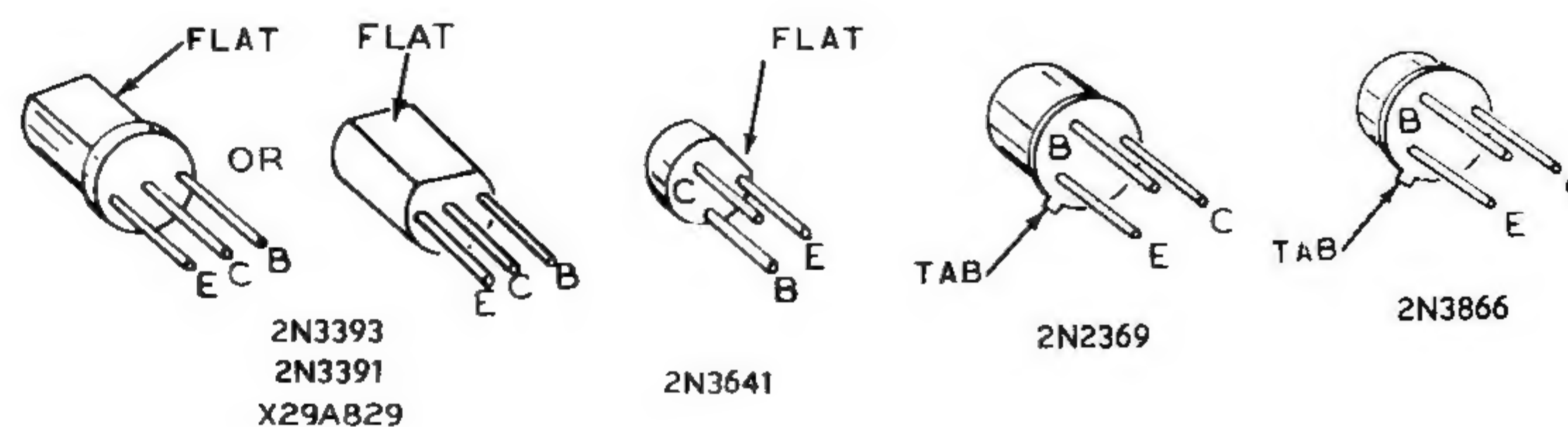


RF CIRCUIT BOARD



	CRYSTAL FREQUENCY MHZ	
	TRANSMITTER	RECEIVER
27 MHZ BAND	26.995	26.542
	27.045	26.592
	27.095	26.642
	27.145	26.692
	27.195	26.742
53 MHZ BAND	53.100	26.3235
	53.200	26.3735
	53.300	26.4235
	53.400	26.4735
	53.500	26.5235
72 MHZ BAND	36.040	36.2665
	36.120	36.3465
	36.200	36.4265
	36.480	36.7065
	37.820	37.5935

- RESISTOR AND CAPACITOR NUMBERS ARE IN THE FOLLOWING GROUPS:
0-99 PARTS MOUNTED ON THE ENCODER CIRCUIT BOARD.
100-199 PARTS MOUNTED ON THE RF CIRCUIT BOARD.
200-299 PARTS MOUNTED ON THE CHASSIS.
- ALL RESISTORS ARE 1/2 WATT UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K = 1000).
- ALL CAPACITOR VALUES ARE IN μ F UNLESS MARKED OTHERWISE.
- THIS SYMBOL INDICATES A POSITIVE DC VOLTAGE MEASUREMENT, TAKEN WITH A HIGH IMPEDANCE VOLT-METER, FROM THE POINT INDICATED TO CHASSIS GROUND. VOLTAGES MAY VARY $\pm 20\%$.
- REFER TO THE CHASSIS PHOTOGRAPHS AND CIRCUIT BOARD X-RAY VIEWS FOR THE PHYSICAL LOCATION OF PARTS.



The transmitter circuit is enclosed in a dashed box and includes the following components and connections:

- Power Supply:** A B+ supply line runs across the top of the circuit.
- Q101 2N2369 OSCILLATOR:**
 - Base (B) is connected to a MOD input, a .001F capacitor (C103), and a 4700Ω resistor (R102).
 - Emitter (E) is connected to a 4700Ω resistor (R101) and a 15pF capacitor (C101) to ground.
 - Collector (C) is connected to a 22pF capacitor (C102) and a 4.65μH inductor (L104) to the B+ supply.
 - A 36pF capacitor (C105) is connected between the collector and base.
 - A 100pF capacitor (C104) is connected between the emitter and ground.
 - A 150Ω resistor (R103) is connected between the emitter and ground.
 - A 3.3pF capacitor (C107) is connected between the collector and ground.
 - A 2.7pF capacitor (C106) is connected between the emitter and ground.
 - A 100pF capacitor (C108) is connected between the collector and ground.
 - A 100pF capacitor (C109) is connected between the collector and ground.
 - A 100pF capacitor (C110) is connected between the emitter and ground.
 - A 100pF capacitor (C111) is connected between the collector and ground.
 - A 100pF capacitor (C112) is connected between the emitter and ground.
 - A 100pF capacitor (C113) is connected between the collector and ground.
 - A 100pF capacitor (C114) is connected between the emitter and ground.
 - A 100pF capacitor (C115) is connected between the collector and ground.
- Q102 2N3866 RF AMPLIFIER:**
 - Base (B) is connected to a -15V supply.
 - Emitter (E) is connected to ground.
 - Collector (C) is connected to a 9.6μH inductor (L103) and a 22pF capacitor (C109) to ground.
 - A 100pF capacitor (C106) is connected between the collector and ground.
 - A 100pF capacitor (C107) is connected between the collector and ground.
 - A 100pF capacitor (C108) is connected between the collector and ground.
 - A 100pF capacitor (C109) is connected between the collector and ground.
 - A 100pF capacitor (C110) is connected between the emitter and ground.
 - A 100pF capacitor (C111) is connected between the collector and ground.
 - A 100pF capacitor (C112) is connected between the emitter and ground.
 - A 100pF capacitor (C113) is connected between the collector and ground.
 - A 100pF capacitor (C114) is connected between the emitter and ground.
 - A 100pF capacitor (C115) is connected between the collector and ground.
- Antenna Section:**
 - A 22pF capacitor (C114) is connected between the collector of Q102 and the antenna input (A).
 - A 9.8μH inductor (L105) is connected between the antenna input (A) and the antenna output (M).
 - A 39K resistor (R106) is connected between the antenna output (M) and ground.
 - A .01F capacitor (C113) is connected between the antenna output (M) and ground.
 - A 100pF capacitor (C114) is connected between the antenna output (M) and ground.
 - A 100pF capacitor (C115) is connected between the antenna output (M) and ground.
- Identification Key:** A switch labeled "IDENTIFICATION KEY" with positions 1 and 2 is connected to the antenna output (M) and the antenna input (A).
- Connections:** The circuit is connected to a "TO R201 LUG 2" and a "TO R203 LUG 1" terminal block.

Diagram showing the pin connections for the 2N2369 and 2N3866 transistors. The 2N2369 has pins B, E, and C. The 2N3866 has pins B, E, and C. Both have a TAB (tab) connection.